

Pest Update (July 11, 2018)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem.

Available on the net at:

<http://sdda.sd.gov/conservation-forestry/forest-health/tree-pest-alerts/>

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions and the label is the final authority for a product's use on a pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such, but it is the reader's responsibility to determine if they can legally apply any products identified in this publication.

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Plant Development

We are a little ahead of schedule for plant development this year, the hot weather is accelerating plant growth. The Amur maackias (*Maackia amurensis*) are in bloom. Some years they do not bloom until the end of July or even early August. This is one of my favorite small trees. It has attractive coppery bark; the leaves emerge with a gray coloring (a spring color) and the summer flowers bloom at a time when most trees have finished flowering.

Timely Topics

Emerald ash borer update



Calls and pictures keep coming in of suspected infested trees. This is also the time of year when foresters from out East drive through South Dakota on their way to the Black Hills and Yellowstone and report they found emerald ash borer at just about every town and rest stop they visit. The reason for these reports is about half our ash look like they are infested by emerald ash borer – dieback is a normal appearance to our most of our ash trees. Unless they are growing in an irrigated lawn in Mitchell, Sioux Falls, Vermillion, or Yankton, ash will have some degree of dieback

and dead branches.

An emerald ash borer infested tree will have extensive woodpecker damage in its upper canopy. The trunks will have large (at least 1 foot long) patches of bark removed so that the crevices are not even visible. There will be large holes within these patches where



the woodpeckers were searching for the emerald ash borer larvae tunneling just beneath the bark.



The emerald ash borer has been flying for about a month now. Some of the eggs have hatched and the larvae are beginning to tunnel. There are a few first instar larvae in the trees. These are about 6 mm long. I can

also find third instar larvae (19 mm long) which means we have some emerald ash borer with a two- year life cycle as it is too short of time for larvae to reach the third instar from this year's eggs. This means you can find larvae just about any time of the year in at least some of the infested trees.

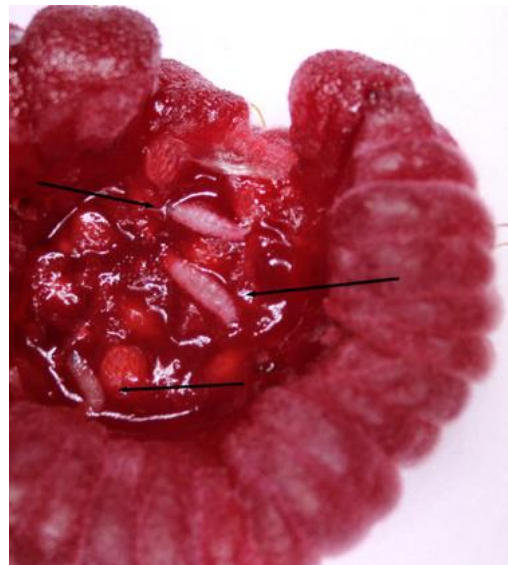
Once the outbreak becomes well established we probably will find mostly a one-year life cycle.



Spotted wing drosophila is infesting fruit in South Dakota. The first reports came in this week from southeastern South Dakota in strawberries. The spotted wing drosophila (*Drosophila suzukii*) is a small vinegar fly that was first discovered in the United States in 2008 and since that time has moved throughout the country and into our state. It is a very tiny fly, a small fraction of an

inch, so cannot fly far. How did it get everywhere so quickly? You guess it – people and their vehicles.

This fly is a problem with small fruits, in our state the currants, elderberries, grapes, raspberries and strawberries. It also will infest aronia and cherries. It is becoming a major headache as the female cuts into the ripe fruit with a saw-like ovipositor to inject the eggs beneath the thin skin of the fruit. The eggs hatch in one to three days and the larvae quickly swarm the inside of the fruit rendering it into mush. There is nothing worse (well one thing) than collecting a tray of raspberries, placing them in the refrigerator and the next day having nothing but a tray of slime. The “one thing?” Biting into the fruit and noticing an off-taste and texture and realizing you ate a fruit filled with these worms! Yum! You might not notice them at all and according to the literature eating them is not harmful to humans – just gross.



The short life cycle means that there are multiple generations per year, so this insect can easily, and quickly, destroy a crop. Since the insect attacks only ripe fruit, fruit that will be harvested very soon, there are fewer insecticide options available to producers and home fruit growers. The insecticides are applied to kill the adults before they lay their eggs. Once the eggs are inserted into the fruit there are no effective treatments. Insecticides containing spinosad or Malathion,

to name two possible treatments, may be used but applicators must follow the label as to crops, intervals between treatments and interval before harvest.

The best way to tell when the insect is in the area (other than find damaged fruit) is monitoring with traps. The insect does not appear to overwinter very well in South Dakota, temperature below about 20°F are fatal, so most of the population is killed except those protected by deep leaf litter or even in cracks in home foundations. It takes some time for the population to build up, so we usually do not see the insect until late June to mid-July depending on the summer temperatures, so June-bearing strawberries and summer raspberries sometimes escape infestations but apparently not this year as everything seems to be a little early.

Photo credit for SWD: Mary Roduner, former SDSU Extension Consumer Horticulture Field

E-samples



Cherries in South Dakota. Nanking cherry (*Prunus tomentosa*) fruit is near harvest. I receive this picture of the almost ripe fruit with the question, what is this plant? Nanking cherries were the cherries you planted back in the days before long-distance transportation of fruit was possible. This tall shrub (6 to 10 feet at maturity) is native to northeastern Asia and is well-adapted to our region. It is hardy to USDA Plant Hardiness Zone 3 and tolerates slightly alkaline soils (at least to a pH of 7.5). However, as with all *Prunus*, it will NOT tolerate wet or poorly drained soils. It is also short-lived, with a typical life span of about 30 years.

The scarlet-red cherries are true cherries and they are edible. They are also very sour. If you ever have eaten a Snicker's bar in your life you will not find these cherries very sweet. If you grew up without everything in your diet containing sugar you might find them tasty. Also keep in mind birds have generally not had many Snicker bars and will readily pick these from the shrubs as they ripen so net the plants or get out there as soon as the fruit ripen, or the birds will beat you to them!

The sweetest cherries are left on the plant and picked as they fall or just before they begin to fall so netting might be the best option. Once picked they can be canned or made into some great jam.



I receive pictures of the **hackberry nipple gall** every mid-summer. This is one of the most common samples I receive. This is not caused by a mite as with maple bladder gall, but a very small psyllid insect, the hackberry nipple gall maker (*Pachypsylla celtidismamma*). The adults overwinter in bark cracks and crevices along the warty bark of the hackberry tree. The adult moves out to the expanding leaves to lay eggs.

The nymphs hatch in about 10 days and begin feeding on the underside of the leaf. This causes the leaf tissue to form a pouch around the insect as they feed. The galls do not harm the tree at all, even if an entire leaf is covered with them.



Hackberry herbicide drift issues. While I like hackberry, and it has become the substitute for ash in windbreaks due to its tolerance of our climate and soils, it is sensitive to herbicide drift. This species along with boxelder (*Acer negundo*) and Siberian elm (*Ulmus pumila*) are the 'canary in the coal mine' for herbicide drift. They are some of

the first tree species affected by drift.

This tree appears to have been exposed to a growth-regulator herbicide, most likely 2,4-D since it is in town. The cupped leaves and curled petioles are common symptoms of exposure to this type of herbicide. It is a common sight to see someone out spraying their lawn weeds on a hot summer day with these products. The problem is the herbicide is easily carried to nearby properties in the warm winds. It is also not the best time to even spray weeds, autumn is the next window of opportunity. Rather than waste time and money spraying lawn weeds, homeowners should take up a more productive hobby such as fishing.

Sample received/site visits

Day County

What is wrong with these bur oak leaves?

The distortions to the leaves are consistent with those presented by trees exposed to 2,4-D or dicamba drift. However, without testing it is impossible to determine if drift is the issue but it is the most likely suspect.

Minnehaha County **What is wrong with this spruce tree? It is dying from the inside out.**

This is cytospora canker, one of the most common diseases of blue spruce (Colorado spruce, *Picea pungens*). Once the trees reach about 20 years of age (usually about 20 feet tall), the disease seems to “appear” and the gradually, but continual, loss of the lower branches occurs. The dying branches infected with the canker will also often have bluish-white resin blisters. There is not much that can be done for managing this disease other than pruning out infected branches. I say appear as the trees tend to be infested at a young age but do not present symptoms until the trees are stressed by age (20 years) or site. Once the trees start touching one another in the belt they are usually beginning to compete, and this is also a stress. It is one reason I recommend at least 16 feet between blue spruce in a belt.

Minnehaha County **What is wrong with these raspberries? The patch seems to be dying out.**

This is anthracnose, unfortunately a common disease of raspberries this year due to the wet weather. The disease often begins as tiny spots on the leaves and these gradually turn a purple. There are also lesions on the canes and these infected stems will have wilted leaves. The best control – and one I used on my raspberries in the past – is an application of copper-sulfur on the canes just before bud break. It is also a good idea to prune out and destroy any infected canes.

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